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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,066	08/29/2005	Shen Ye	10467.57USWO	8906
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MERCHANT & GOULD PC			LEE, BENNY T	
P.O. BOX 2903			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/507,066	Applicant(s) YE, SHEN	
	Examiner Benny Lee	Art Unit 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13 and 14 is/are allowed.
- 6) ☒ Claim(s) 1,2,6-10,15; 3; 4,16-20; 11; 12 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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The disclosure is objected to because of the following informalities: In the replacement paragraph to the second paragraph of page 2, note that updated status information for the cited co-pending application "09/699783" (e.g. --now abandoned--) should be provided. Page 5, line 14, note that a --- should be inserted after "hereof" for grammatical clarity. It is noted that the amendments to "page 4, line 8", page 5, lines 1-6" & "page 7, line 2" are in an improper format (i.e. not written as a "replacement paragraph") and thus have not been entered. Accordingly the following objections remain applicable: Page 4, line 8, note that " Al_2O_3 " should correctly be -- Al_2O_3 -- for a proper characterization. Page 7, line 2, note that "*SI*" should correctly be --*SI*-- for a proper characterization. Appropriate correction is required.

The following claims have been found to be objectionable for reasons set forth below:

In claim 4, line 7, note that --S1-- should be inserted after "first distance" to provide antecedent basis for subsequent recitation of this feature; line 8, note that --F1-- should be inserted after "primary coupling" to provide antecedent basis for subsequent recitations of this feature; line 10, note that --F2-- should be inserted after "secondary coupling" to provide antecedent basis for subsequent recitations of this feature.

In claim 5, line 2, note that --first-- should precede "distance" for consistency in claim terminology.

In claim 10, note that the term "topology" should be rewritten as --configuration-- for clarity of description.

In claim 12, line 4, note that "between" should be rephrased as --overlapping with-- to provide antecedent basis for the subsequent recitation of "the overlap"; line 9, note that "may be" should be rewritten as --is-- for an appropriate characterization.

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In claim 13, lines 3, 5, note that --F1-- should be inserted after “coupling” (line 3) & --F2-- should be inserted after “coupling” (line 5), respectively to provide antecedent basis for subsequent recitations of these couplings.

In claim 15, note that “generally define a plane” should be rephrased as --are located in a common plane-- for clarity of description.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6-8, 15; 4, 16-18, 20; 11; 12 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by either Young et al or Itou.

Young et al (e.g. Fig. 1) discloses a filter apparatus including a plurality of resonators comprising: a first resonator (e.g. 12); a second resonator (e.g. 14) disposed adjacent to and electrically coupled to the first resonator, where the first and second resonators are planar structures disposed on a common planar surface of a substrate (11). Note that the first resonator (12) has opposing ends, with one of the ends of the resonator being bent away from second resonator (14). Therefore, the coupling distance of the bent end (i.e. characterized as a “primary coupling”) of the first resonator (12) from second resonator (14) is greater than (i.e. different from or not the same as) the coupling distance of the non-bent end (i.e. characterized as a “secondary coupling”) of the resonator (12) from second resonator (14). It should be noted that the orientation of the bent end determines the degree of the primary coupling independent of the secondary coupling. Moreover, it should be noted that the primary coupling is primarily

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capacitive, while the secondary coupling is primarily inductive (i.e. by virtue of the second ends of the first and second resonators being electrically connected by a “coupling strip” or transmission line (20), thereby providing an “overlapping” coupling of the second ends of the first and second resonators through the inductance of the transmission line).

Likewise, Itou (e.g. Fig. 20) discloses a filter including a plurality of resonator comprising: a first resonator (e.g. 11); a second resonator (e.g. 12) disposed adjacent to and electrically coupled to the first resonator, where the first and second resonators are planar structures disposed on a common planar surface of a substrate (A). Note that the first and second resonators (11, 12) each have opposing ends, with one of the ends of the first and second resonators (11, 12) including an open portion (1a) and a short circuit portion (1c), which has a width which is narrower than the width of open portion (1a). Therefore, by virtue of such a different width configuration of the resonators, the coupling distance of the wider open portion (i.e. 1a which is characterized as a “primary coupling”) of the first resonator (11) from the second resonator (12) is different from or not the same (i.e. narrower) as compared to the coupling distance of the narrower width short-circuit end portion (i.e. 1c which is characterized as a “secondary coupling”) of the first resonator (11) from second resonator (12). It should be noted that the orientation of the wider width open portion (1a) determines the degree of the primary coupling independent of the secondary coupling. Moreover, it should be noted that the primary coupling is primarily capacitive, while the secondary coupling is primarily inductive (i.e. by virtue of the second ends of the first and second resonators being electrically connected by a “coupling strip” or short circuit electrode (4), thereby providing an “overlapping” coupling

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of the second ends of the first and second resonators through the inductance of the short circuit electrode).

Claim 3 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Itou.

Note that by virtue of the closer coupling of the open circuit portions (1a) of the first and second resonators (11, 12), such a primary coupling provides a larger coupling interface relative to the lesser coupling interface at the second ends of the first and second resonators.

Claims 9; 19 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Young et al.

Note that Young et al discloses a coupling strip (i.e. ribbon 30) which electrically couples non-adjacent resonators (i.e. coupling resonator (12) to resonator (18), as depicted in Fig. 1 and described at column 2, lines 17, 18.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Young et al or Itou in view of the Setsune et al patent abstract (of record).

Note that each primary reference discloses the claimed invention except for the resonators being a HTS material disposed on a substrate of a specific dielectric material.

As described previously, the Setsune et al abstract discloses planar resonators (e.g. see Fig. 3) made of a HTS material layer (3) of e.g. Bi-Sr-Ca-Cu-O disposed on an MgO substrate (1).

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Accordingly, it would have been obvious in view of the references, taken as a whole, to have realized the planar resonators in either one of the primary references to have included a HTS material disposed on an MgO substrate, such as taught by Setsune et al. Such a modification would have been considered obvious since it would have imparted the advantageous benefit of low loss signal conductivity, taught by the HTS configuration in Setsune et al, to the planar resonator filters of either primary reference, thereby suggesting the obviousness of such a modification.

Applicant's arguments with respect to claims 1, 2, 6-8, 10; 11 have been considered but are moot in view of the new grounds of rejection.

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim.

Claims 13, 14 are allowable over the prior art of record since none of the prior art references fairly teach or suggest first and second resonators having a coupling being a function of the parameters recited therein.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number 571 272 1764.

B. Lee


BENNY T. LEE
PRIMARY EXAMINER
ART UNIT 2817